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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,901	03/10/2004	Fred A. Brown	917/198	3383
2101 7590 03/05/2009 BROMBERG & SUNSTEIN LLP 125 SUMMER STREET BOSTON, MA 02110-1618				
EXAMINER				
LAM, THANH				
ART UNIT		PAPER NUMBER		
2834				
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03/05/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/797,901

Applicant(s)

BROWN, FRED A.

Examiner

THANH LAM

Art Unit

2834

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE 1/21/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-21 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20, 21 and 23-25 is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Slack et al. (GB 2083953 A).

Regarding claim 1, Slack et al. disclose a fan assembly comprising: a motor containing a stator (14); a rotor (22) having a shaft (18) and a plurality of blades (20), wherein the motor rotates the shaft and blades moving air; a sleeve bearing (16, portion of housing 12 accommodate the bearing 17) in contact with the rotor shaft, the sleeve bearing being fixedly secured to the stator; and a movable support member (31) axially supporting the shaft, the movable support member being movable relative to the shaft.

Regarding claim 2, Slack et al. disclose a housing (12) at least in part encasing the stator, the housing forming a recess (30) for supporting the movable support member.

Regarding claim 3, Slack et al. disclose the movable support member is a spherical member (31).

Regarding claim 4, Slack et al. disclose the spherical member is a ball bearing (31).

Regarding claim 5, Slack et al. disclose a housing at least in part encasing the stator, the housing forming a recess for supporting the movable support member, wherein the moveable support member is a spherical member and the recess has a depth (bottom recess of 30) less than a radius of the spherical member.

Regarding claim 8, Slack et al. disclose a rotor hub coupled to the shaft, the rotor hub being spaced from the sleeve bearing.

Regarding claim 9, Slack et al. disclose the rotor includes a rotor magnet, the rotor magnet being oriented with the stator to bias the rotor toward the movable support member.

Regarding claim 10, Slack et al. disclose the movable support member contacts the shaft when the motor is right side up and when the motor is upside down.

Regarding claim 11, Slack et al. disclose the center of gravity of the rotor coincides with an opening in the sleeve bearing that accommodates the shaft.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-7,12-14,16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slack et al. in view of Hollenback et al. (US 6,271,609).

Regarding claim 12, Slack disclose (as applied to claim 1) a fan assembly comprising: a motor; a stator located inside the motor; a rotor having a shaft and a

plurality of blades that are rotatably coupled with the stator, wherein the motor rotates the shaft and blades moving air; and a movable support member supporting the weight of the rotor, the movable support member being movable relative the shaft.

Hollenback et al. disclose an upper and lower thrust washer (120,122) not fixedly secured to the shaft or sleeve bearing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the bearing of Slack to accommodate the thrust washer arrangement as taught by Hollenback et al. it would expect the same result as claimed invention.

Regarding claim 6, the proposal in combination of Slack and Hollenback et al. disclose a retaining washer about the shaft

Regarding claim 7, the proposal in combination of Slack and Hollenback et al. disclose the shaft has a lower end, the retaining washer being located between the lower end of the shaft and the sleeve bearing.

Regarding claim 13, the proposal in combination of Slack and Hollenback et al. disclose a housing about the stator, the housing forming a recess for retaining the support member.

Regarding claim 14, the proposal in combination of Slack and Hollenback et al. disclose a sleeve bearing rotatably coupled with the shaft.

Regarding claim 16, the proposal in combination of Slack and Hollenback et al. disclose the rotor includes a rotor magnet that normally biases the rotor toward the support member.

Regarding claim 17, the proposal in combination of Slack and Hollenback et al. disclose the support member has a spherical shape.

Regarding claim 18, the proposal in combination of Slack and Hollenback et al. disclose the stator has DC commutation circuitry (40).

Regarding claim 19, the proposal in combination of Slack and Hollenback et al. disclose the center of gravity of the rotor coincides with an opening in the sleeve bearing that accommodates the shaft.

Allowable Subject Matter

5. Claims 20-25 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THANH LAM whose telephone number is (571)272-2026. The examiner can normally be reached on Mo-Fr, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen P. Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh Lam/
Primary Examiner
Art Unit 2834
